



October 18, 2022

Penske Truck Leasing
8100 NE Parkway Drive, Suite 350
Vancouver, Washington 98662

Attn: Mr. Josh Lester

Re: Penske Truck Leasing
Traffic Study Letter
Aurora, Colorado

Dear Mr. Lester,

This letter documents the results of a traffic evaluation including trip generation, trip distribution, traffic assignment, and driveway vehicle queuing analysis for the proposed expansion of an existing Penske Truck Leasing facility located at 15600 32nd Avenue in Aurora, Colorado. A vicinity map of the site is attached as **Figure 1**. The existing facility includes 9,816 square feet of service bays and 5,120 square feet of office space. The expansion project is proposed to add 9,282 square feet of service bays and 1,600 square feet of office space. Therefore, upon completion of the expansion, Penske will have a total of 19,098 square feet of service bays and 6,760 square feet of office space. A conceptual site plan for the Penske expansion is attached.

Regional access to Penske is provided by Interstate 70 (I-70) and Interstate 225 (I-225) while primary access is provided along 32nd Avenue. Direct access is provided by two existing full movement accesses along the south side of 32nd Avenue, approximately 550 feet and 850 feet east of Chambers Road.

TRIP GENERATION

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the Trip Generation Manual¹ published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. However, the ITE Trip Generation Manual does not have a land use code applicable to the Penske Truck Leasing facility. Therefore, trip generation was based on existing counts collected entering and exiting the existing site (traffic counts attached). To provide a conservative analysis, the trip generation of the proposed expansion was assumed to be prorated to the service bay expansion, with an approximate 95 percent increase in that use size as compared to the office expansion being an approximate 31 percent increase in size. The following **Table 1** summarizes the estimated trip generation for the Penske expansion.

¹ Institute of Transportation Engineers, *Trip Generation Manual*, Eleventh Edition, Washington DC, 2021.

Table 1 – Penske Expansion Traffic Generation

Use	Weekday Vehicles Trips					
	AM Peak Hour of Adjacent Street			PM Peak Hour of Adjacent Street		
	In	Out	Total	In	Out	Total
Existing	35	29	64	20	25	45
Expanded	33	28	61	19	24	43
Total	68	57	125	39	49	88

As summarized in Table 1, the Penske expansion may generate 61 more trips during the morning peak hour and 43 more trips during the afternoon peak hour. This would result in approximately 125 trips occurring during the morning peak hour and 88 trips occurring during the afternoon peak hour for the entire facility after the expansion is complete.

TRIP DISTRIBUTION, TRAFFIC ASSIGNMENT, AND TOTAL TRAFFIC

Trip distribution of traffic to Penske was identified based on the area street system characteristics, surrounding demographic information, and the access system for the project. The distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a given direction and departs the site back to the original source. Expansion project traffic assignment was obtained by applying the project trip distribution to the estimated project traffic generation of the development shown in **Table 1**. **Figure 2** illustrates the trip distribution on the surrounding street network while **Figure 3** illustrates traffic assignment volumes for the proposed Penske expansion at the adjacent intersections and accesses. Site generated traffic volumes at the project accesses were added to the existing volumes to represent estimated traffic conditions for the 2022 buildout horizon. These total traffic volumes for the project accesses are illustrated for the buildout year in **Figure 4**.

VEHICLE QUEUING ANALYSIS

A vehicle queuing analysis was conducted for the project access intersections. The queuing analysis was performed using Synchro presenting the results of the 95th percentile queue lengths. Results are shown in the following **Table 2** with calculations provided within the attached level of service operational sheets.

Table 2 – Project Access Vehicle Queuing Analysis

Intersection Turn Lane	Existing Turn Lane Length (feet)	Existing Plus Project Calculated Queue (feet)	Existing Plus Project Recommended Length (feet)
32nd Ave & West Access (#2)			
Northbound Approach	C (50')	1 Vehicle (40')	C (50')
Westbound Through/Left	C	1 Vehicle (40')	C
32nd Ave & East Access (#3)			
Northbound Approach	C (40')	1 Vehicle (40')	C (40')
Westbound Through/Left	C	1 Vehicle (40')	C

C = Continuous Lane

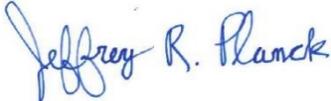
As shown in **Table 2** above, with the expansion of the existing Penske facility, all vehicle queues entering and exiting the project site are anticipated to consist of a maximum length of one (1) vehicle (40 feet for large box truck).

CONCLUSIONS AND RECOMMENDATIONS

Kimley-Horn believes the Penske expansion will be accommodated on the existing roadway network, same as today. No changes to the existing Penske accesses are proposed. Therefore, the Penske expansion project is not anticipated to adversely impact the surrounding street network. If you have any questions or require anything further, please feel free to call me at (303) 228-2300.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



Jeffrey R. Planck, P.E.
Project Manager

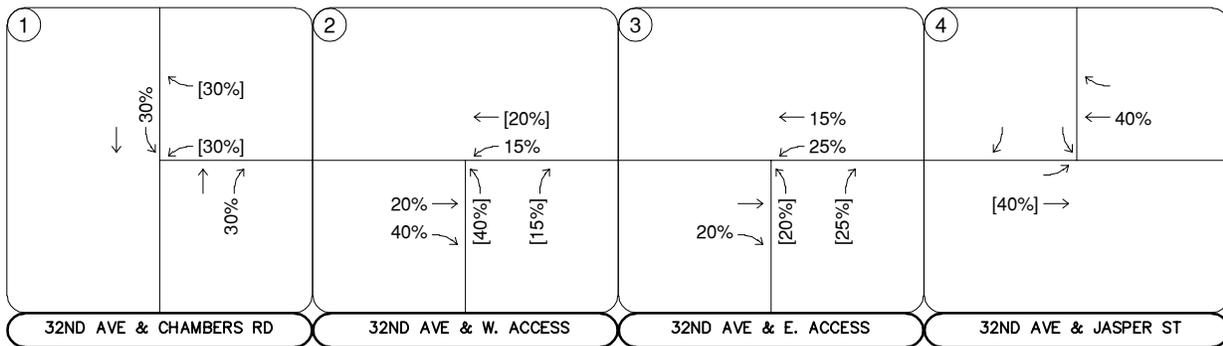


Figures



PENSKE
AURORA, COLORADO
VICINITY MAP

FIGURE 1



LEGEND

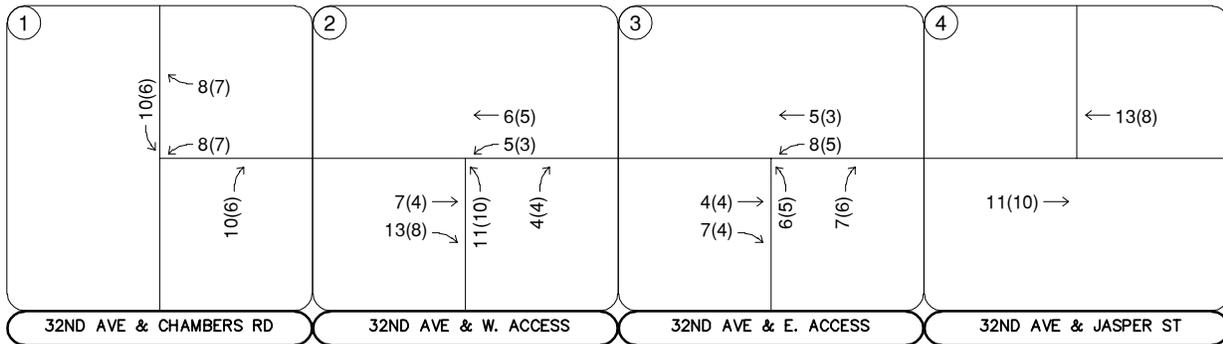
⊗ Study Area Key Intersection

↔ XX% External Trip Distribution Percentage

XX% [XX%] Entering [Exiting] Trip Distribution Percentage

PENSKE
 AURORA, COLORADO
 PROJECT TRIP DISTRIBUTION

FIGURE 2



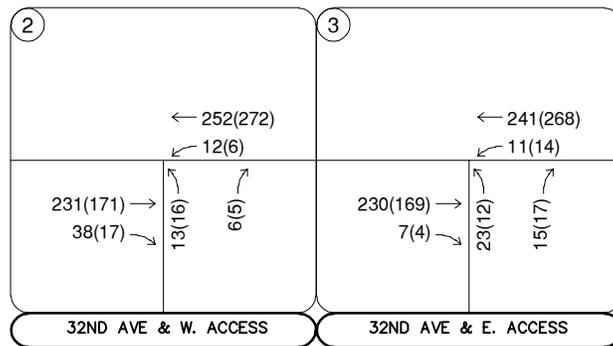
LEGEND

(X) Study Area Key Intersection

XXX(XXX) Weekday AM(PM)
 Peak Hour Traffic Volumes

PENSKE
 AURORA, COLORADO
 PROJECT TRAFFIC ASSIGNMENT

FIGURE 3



PENSKE
 AURORA, COLORADO
 EXISTING PLUS PROJECT
 TRAFFIC VOLUMES (ACCESS)

LEGEND

(X) Study Area Key Intersection

XXX(XXX) Weekday AM(PM)
 Peak Hour Traffic Volumes

FIGURE 4

Existing Traffic Counts

32nd Ave West Access 32nd Ave

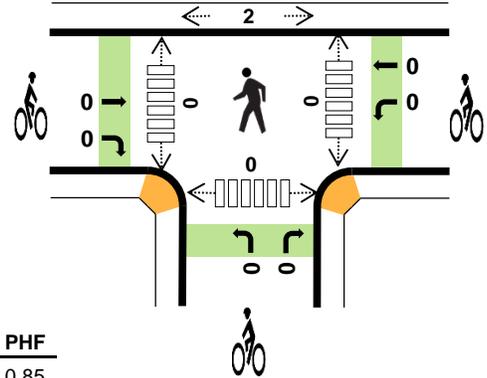
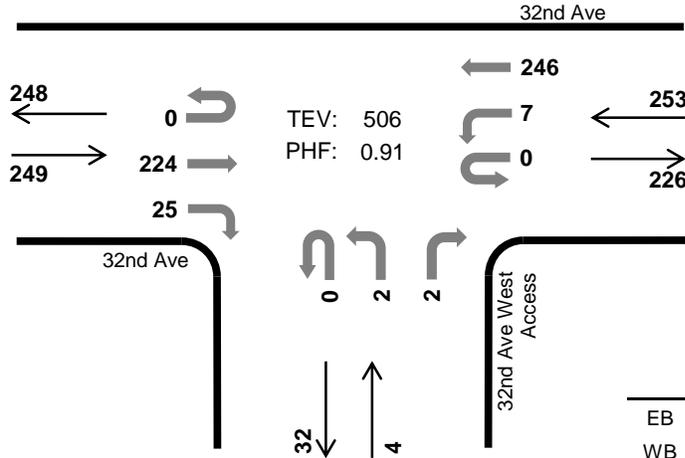


Peak Hour

Date: 08/17/2022

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:00 AM to 8:00 AM



	HV %:	PHF
EB	19.3%	0.85
WB	36.8%	0.97
NB	50.0%	0.50
SB	-	-
TOTAL	28.3%	0.91

Two-Hour Count Summaries

Interval Start	32nd Ave Eastbound				32nd Ave Westbound				32nd Ave West Access Northbound				N/A Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	54	9	0	3	58	0	0	0	0	0	0	0	0	0	124	0	
7:15 AM	0	0	44	7	0	1	64	0	0	1	0	0	0	0	0	0	117	0	
7:30 AM	0	0	59	3	0	1	61	0	0	1	0	1	0	0	0	0	126	0	
7:45 AM	0	0	67	6	0	2	63	0	0	0	0	1	0	0	0	0	139	506	
8:00 AM	0	0	39	2	0	1	51	0	0	1	0	0	0	0	0	0	94	476	
8:15 AM	0	0	48	5	0	0	47	0	0	1	0	0	0	0	0	0	101	460	
8:30 AM	0	0	33	3	0	3	48	0	0	0	0	0	0	0	0	0	87	421	
8:45 AM	0	0	27	3	0	1	39	0	0	1	0	0	0	0	0	0	71	353	
Count Total	0	0	371	38	0	12	431	0	0	5	0	2	0	0	0	0	859	0	
Peak Hour	All	0	0	224	25	0	7	246	0	0	2	0	2	0	0	0	0	506	0
	HV	0	0	32	16	0	2	91	0	0	0	0	2	0	0	0	0	143	0
	HV%	-	-	14%	64%	-	29%	37%	-	-	0%	-	100%	-	-	-	-	28%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	9	21	0	0	30	0	0	0	0	0	0	0	0	0	0
7:15 AM	17	25	0	0	42	0	0	0	0	0	0	0	1	0	1
7:30 AM	12	26	1	0	39	0	0	0	0	0	0	0	1	0	1
7:45 AM	10	21	1	0	32	0	0	0	0	0	0	0	0	0	0
8:00 AM	7	17	1	0	25	0	0	0	0	0	0	0	0	0	0
8:15 AM	9	19	0	0	28	0	0	0	0	0	0	0	0	0	0
8:30 AM	6	24	0	0	30	0	0	0	0	0	0	0	0	0	0
8:45 AM	10	20	0	0	30	0	0	0	0	0	0	0	0	0	0
Count Total	80	173	3	0	256	0	0	0	0	0	0	0	2	0	2
Peak Hr	48	93	2	0	143	0	0	0	0	0	0	0	2	0	2

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	32nd Ave				32nd Ave				32nd Ave West Access				N/A				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	4	5	0	1	20	0	0	0	0	0	0	0	0	30	0	
7:15 AM	0	0	11	6	0	0	25	0	0	0	0	0	0	0	0	42	0	
7:30 AM	0	0	9	3	0	0	26	0	0	0	0	1	0	0	0	39	0	
7:45 AM	0	0	8	2	0	1	20	0	0	0	0	1	0	0	0	32	143	
8:00 AM	0	0	5	2	0	1	16	0	0	1	0	0	0	0	0	25	138	
8:15 AM	0	0	8	1	0	0	19	0	0	0	0	0	0	0	0	28	124	
8:30 AM	0	0	4	2	0	2	22	0	0	0	0	0	0	0	0	30	115	
8:45 AM	0	0	9	1	0	1	19	0	0	0	0	0	0	0	0	30	113	
Count Total	0	0	58	22	0	6	167	0	0	1	0	2	0	0	0	256	0	
Peak Hour	0	0	32	16	0	2	91	0	0	0	0	2	0	0	0	143	0	

Two-Hour Count Summaries - Bikes

Interval Start	32nd Ave			32nd Ave			32nd Ave West Access			N/A			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

32nd Ave West Access 32nd Ave

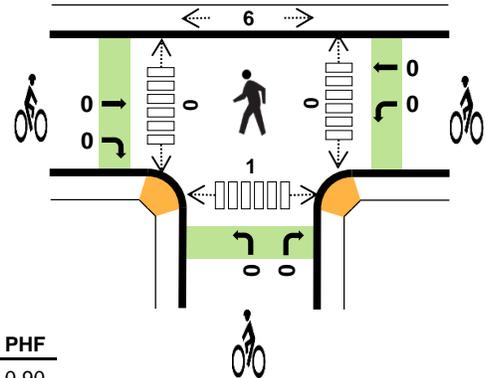
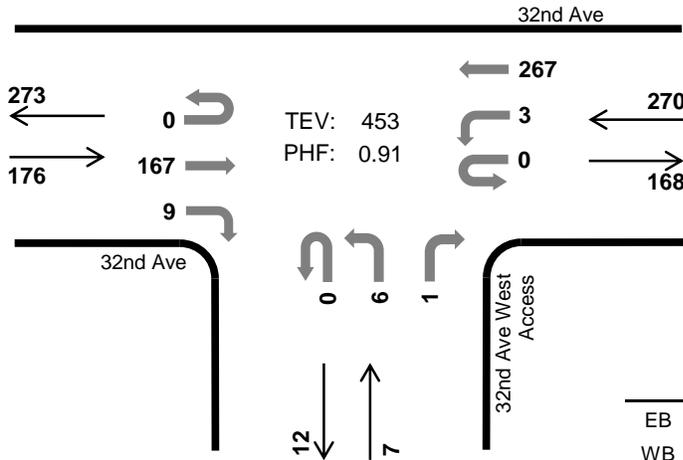


Peak Hour

Date: 08/17/2022

Count Period: 3:00 PM to 5:00 PM

Peak Hour: 3:45 PM to 4:45 PM



	HV %:	PHF
EB	26.7%	0.90
WB	13.3%	0.80
NB	28.6%	0.58
SB	-	-
TOTAL	18.8%	0.91

Two-Hour Count Summaries

Interval Start	32nd Ave Eastbound				32nd Ave Westbound				32nd Ave West Access Northbound				N/A Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
3:00 PM	0	0	43	5	0	4	73	0	0	0	0	1	0	0	0	0	126	0	
3:15 PM	0	0	29	3	0	3	72	0	0	2	0	1	0	0	0	0	110	0	
3:30 PM	0	0	31	0	1	0	75	0	0	2	0	1	0	0	0	0	110	0	
3:45 PM	0	0	41	4	0	0	53	0	0	1	0	0	0	0	0	0	99	445	
4:00 PM	0	0	41	2	0	0	74	0	0	2	0	1	0	0	0	0	120	439	
4:15 PM	0	0	47	2	0	1	58	0	0	2	0	0	0	0	0	0	110	439	
4:30 PM	0	0	38	1	0	2	82	0	0	1	0	0	0	0	0	0	124	453	
4:45 PM	0	0	36	0	0	0	53	0	0	1	0	0	0	0	0	0	90	444	
Count Total	0	0	306	17	1	10	540	0	0	11	0	4	0	0	0	0	889	0	
Peak Hour	All	0	0	167	9	0	3	267	0	0	6	0	1	0	0	0	0	453	0
	HV	0	0	43	4	0	2	34	0	0	2	0	0	0	0	0	0	85	0
	HV%	-	-	26%	44%	-	67%	13%	-	-	33%	-	0%	-	-	-	-	19%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:00 PM	16	12	0	0	28	0	0	0	0	0	0	0	0	0	0
3:15 PM	7	13	2	0	22	0	0	0	0	0	0	0	1	0	1
3:30 PM	6	9	1	0	16	0	0	0	0	0	0	0	0	0	0
3:45 PM	14	12	1	0	27	0	0	0	0	0	0	0	2	1	3
4:00 PM	14	12	0	0	26	0	0	0	0	0	0	0	0	0	0
4:15 PM	10	6	1	0	17	0	0	0	0	0	0	0	4	0	4
4:30 PM	9	6	0	0	15	0	0	0	0	0	0	0	0	0	0
4:45 PM	9	9	0	0	18	0	0	0	0	0	0	0	0	0	0
Count Total	85	79	5	0	169	0	0	0	0	0	0	0	7	1	8
Peak Hr	47	36	2	0	85	0	0	0	0	0	0	0	6	1	7

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	32nd Ave				32nd Ave				32nd Ave West Access				N/A				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	0	11	5	0	3	9	0	0	0	0	0	0	0	0	28	0	
3:15 PM	0	0	5	2	0	2	11	0	0	1	0	1	0	0	0	22	0	
3:30 PM	0	0	6	0	1	0	8	0	0	0	0	1	0	0	0	16	0	
3:45 PM	0	0	12	2	0	0	12	0	0	1	0	0	0	0	0	27	93	
4:00 PM	0	0	13	1	0	0	12	0	0	0	0	0	0	0	0	26	91	
4:15 PM	0	0	9	1	0	0	6	0	0	1	0	0	0	0	0	17	86	
4:30 PM	0	0	9	0	0	2	4	0	0	0	0	0	0	0	0	15	85	
4:45 PM	0	0	9	0	0	0	9	0	0	0	0	0	0	0	0	18	76	
Count Total	0	0	74	11	1	7	71	0	0	3	0	2	0	0	0	169	0	
Peak Hour	0	0	43	4	0	2	34	0	0	2	0	0	0	0	0	85	0	

Two-Hour Count Summaries - Bikes

Interval Start	32nd Ave			32nd Ave			32nd Ave West Access			N/A			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

32nd Ave East Access 32nd Ave

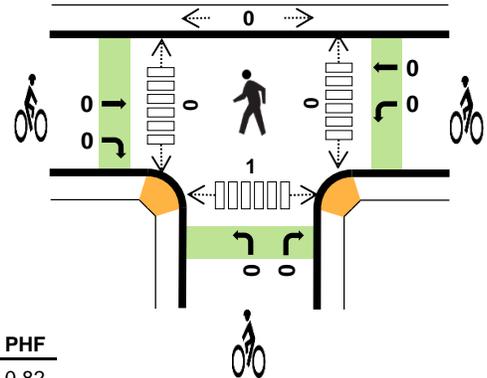
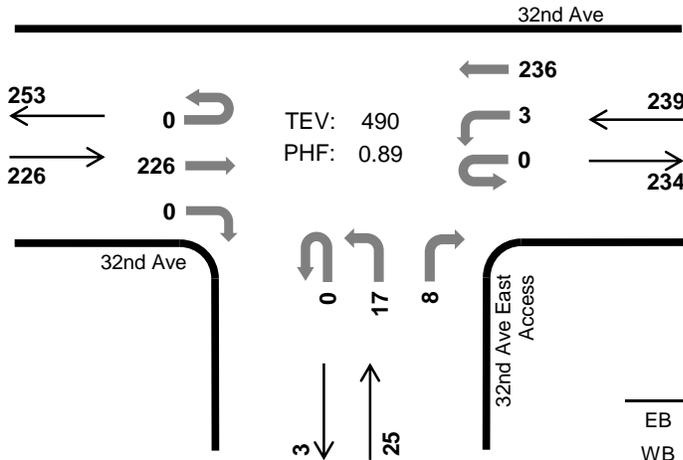


Peak Hour

Date: 08/17/2022

Count Period: 7:00 AM to 9:00 AM

Peak Hour: 7:00 AM to 8:00 AM



	HV %:	PHF
EB	15.0%	0.82
WB	33.9%	0.95
NB	84.0%	0.89
SB	-	-
TOTAL	27.8%	0.89

Two-Hour Count Summaries

Interval Start	32nd Ave Eastbound				32nd Ave Westbound				32nd Ave East Access Northbound				n/a Southbound				15-min Total	Rolling One Hour	
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT			
7:00 AM	0	0	55	0	0	1	58	0	0	5	0	2	0	0	0	0	121	0	
7:15 AM	0	0	42	0	0	1	58	0	0	6	0	0	0	0	0	0	107	0	
7:30 AM	0	0	60	0	0	1	57	0	0	4	0	2	0	0	0	0	124	0	
7:45 AM	0	0	69	0	0	0	63	0	0	2	0	4	0	0	0	0	138	490	
8:00 AM	0	0	40	0	0	0	48	0	0	3	0	1	0	0	0	0	92	461	
8:15 AM	0	0	48	0	0	1	48	0	0	0	0	1	0	0	0	0	98	452	
8:30 AM	0	0	33	0	0	0	50	0	0	2	0	1	0	0	0	0	86	414	
8:45 AM	0	0	26	0	0	1	38	0	0	3	0	1	0	0	0	0	69	345	
Count Total	0	0	373	0	0	5	420	0	0	25	0	12	0	0	0	0	835	0	
Peak Hour	All	0	0	226	0	0	3	236	0	0	17	0	8	0	0	0	0	490	0
	HV	0	0	34	0	0	2	79	0	0	15	0	6	0	0	0	0	136	0
	HV%	-	-	15%	-	-	67%	33%	-	-	88%	-	75%	-	-	-	-	28%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	4	18	5	0	27	0	0	0	0	0	0	0	0	1	1
7:15 AM	11	21	5	0	37	0	0	0	0	0	0	0	0	0	0
7:30 AM	10	23	6	0	39	0	0	0	0	0	0	0	0	0	0
7:45 AM	9	19	5	0	33	0	0	0	0	0	0	0	0	0	0
8:00 AM	5	13	4	0	22	0	0	0	0	0	0	0	0	0	0
8:15 AM	8	19	1	0	28	0	0	0	0	0	0	0	0	0	0
8:30 AM	4	24	1	0	29	0	0	0	0	0	0	0	0	0	0
8:45 AM	9	18	4	0	31	1	0	0	0	1	0	0	0	1	1
Count Total	60	155	31	0	246	1	0	0	0	1	0	0	0	2	2
Peak Hr	34	81	21	0	136	0	0	0	0	0	0	0	0	1	1

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	32nd Ave				32nd Ave				32nd Ave East Access				n/a				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	4	0	0	0	18	0	0	4	0	1	0	0	0	0	27	0
7:15 AM	0	0	11	0	0	1	20	0	0	5	0	0	0	0	0	0	37	0
7:30 AM	0	0	10	0	0	1	22	0	0	4	0	2	0	0	0	0	39	0
7:45 AM	0	0	9	0	0	0	19	0	0	2	0	3	0	0	0	0	33	136
8:00 AM	0	0	5	0	0	0	13	0	0	3	0	1	0	0	0	0	22	131
8:15 AM	0	0	8	0	0	0	19	0	0	0	0	1	0	0	0	0	28	122
8:30 AM	0	0	4	0	0	0	24	0	0	1	0	0	0	0	0	0	29	112
8:45 AM	0	0	9	0	0	1	17	0	0	3	0	1	0	0	0	0	31	110
Count Total	0	0	60	0	0	3	152	0	0	22	0	9	0	0	0	0	246	0
Peak Hour	0	0	34	0	0	2	79	0	0	15	0	6	0	0	0	0	136	0

Two-Hour Count Summaries - Bikes

Interval Start	32nd Ave			32nd Ave			32nd Ave East Access			n/a			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	1
Count Total	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	32nd Ave				32nd Ave				32nd Ave East Access				n/a				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	0	11	0	0	0	11	0	0	1	0	1	0	0	0	0	24	0
3:15 PM	0	0	6	0	0	0	11	0	0	2	0	0	0	0	0	0	19	0
3:30 PM	0	0	8	0	0	1	6	0	0	1	0	2	0	0	0	0	18	0
3:45 PM	0	0	12	0	0	0	9	0	0	1	0	2	0	0	0	0	24	85
4:00 PM	0	0	13	0	0	1	10	0	0	1	0	1	0	0	0	0	26	87
4:15 PM	0	0	9	0	0	1	7	0	0	1	0	0	0	0	0	0	18	86
4:30 PM	0	0	9	0	0	1	6	0	0	0	0	3	0	0	0	0	19	87
4:45 PM	0	0	9	0	0	1	8	0	0	1	0	0	0	0	0	0	19	82
Count Total	0	0	77	0	0	5	68	0	0	8	0	9	0	0	0	0	167	0
Peak Hour	0	0	43	0	0	3	32	0	0	3	0	6	0	0	0	0	87	0

Two-Hour Count Summaries - Bikes

Interval Start	32nd Ave			32nd Ave			32nd Ave East Access			n/a			15-min Total	Rolling One Hour	
	Eastbound			Westbound			Northbound			Southbound					
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT			
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Access Vehicle Queuing Worksheets

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Vol, veh/h	231	38	12	252	13	6
Future Vol, veh/h	231	38	12	252	13	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	19	19	37	37	50	50
Mvmt Flow	254	42	13	277	14	7

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	296	0	440
Stage 1	-	-	-	-	275
Stage 2	-	-	-	-	165
Critical Hdwy	-	-	4.84	-	7.8
Critical Hdwy Stg 1	-	-	-	-	6.8
Critical Hdwy Stg 2	-	-	-	-	6.8
Follow-up Hdwy	-	-	2.57	-	4
Pot Cap-1 Maneuver	-	-	1044	-	439
Stage 1	-	-	-	-	621
Stage 2	-	-	-	-	721
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1044	-	432
Mov Cap-2 Maneuver	-	-	-	-	432
Stage 1	-	-	-	-	621
Stage 2	-	-	-	-	710

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	497	-	-	1044	-
HCM Lane V/C Ratio	0.042	-	-	0.013	-
HCM Control Delay (s)	12.6	-	-	8.5	0.1
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Vol, veh/h	171	17	6	272	16	5
Future Vol, veh/h	171	17	6	272	16	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	27	27	13	13	29	29
Mvmt Flow	188	19	7	299	18	5

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	207	0	362
Stage 1	-	-	-	-	198
Stage 2	-	-	-	-	164
Critical Hdwy	-	-	4.36	-	7.38
Critical Hdwy Stg 1	-	-	-	-	6.38
Critical Hdwy Stg 2	-	-	-	-	6.38
Follow-up Hdwy	-	-	2.33	-	3.79
Pot Cap-1 Maneuver	-	-	1285	-	544
Stage 1	-	-	-	-	741
Stage 2	-	-	-	-	773
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1285	-	540
Mov Cap-2 Maneuver	-	-	-	-	540
Stage 1	-	-	-	-	741
Stage 2	-	-	-	-	768

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	591	-	-	1285	-
HCM Lane V/C Ratio	0.039	-	-	0.005	-
HCM Control Delay (s)	11.3	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Vol, veh/h	230	7	11	241	23	15
Future Vol, veh/h	230	7	11	241	23	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	15	15	34	34	84	84
Mvmt Flow	258	8	12	271	26	17

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	266	0	422
Stage 1	-	-	-	-	262
Stage 2	-	-	-	-	160
Critical Hdwy	-	-	4.78	-	8.48
Critical Hdwy Stg 1	-	-	-	-	7.48
Critical Hdwy Stg 2	-	-	-	-	7.48
Follow-up Hdwy	-	-	2.54	-	4.34
Pot Cap-1 Maneuver	-	-	1092	-	392
Stage 1	-	-	-	-	561
Stage 2	-	-	-	-	654
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1092	-	387
Mov Cap-2 Maneuver	-	-	-	-	387
Stage 1	-	-	-	-	561
Stage 2	-	-	-	-	645

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	467	-	-	1092	-
HCM Lane V/C Ratio	0.091	-	-	0.011	-
HCM Control Delay (s)	13.5	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

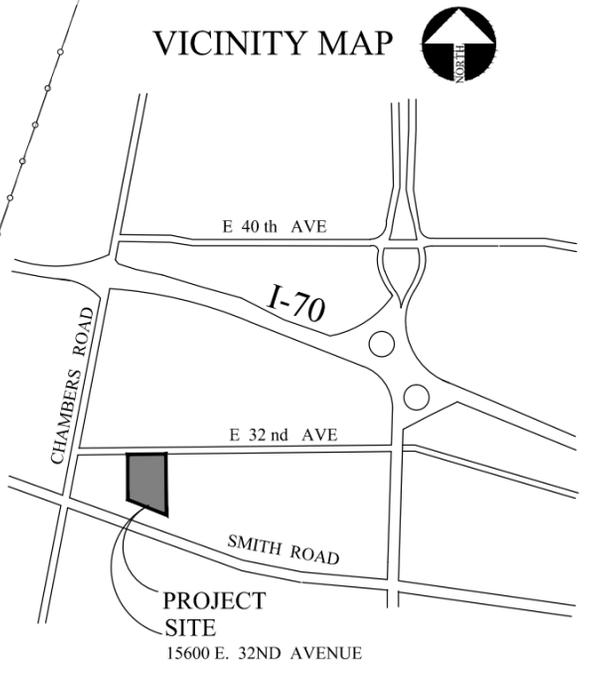
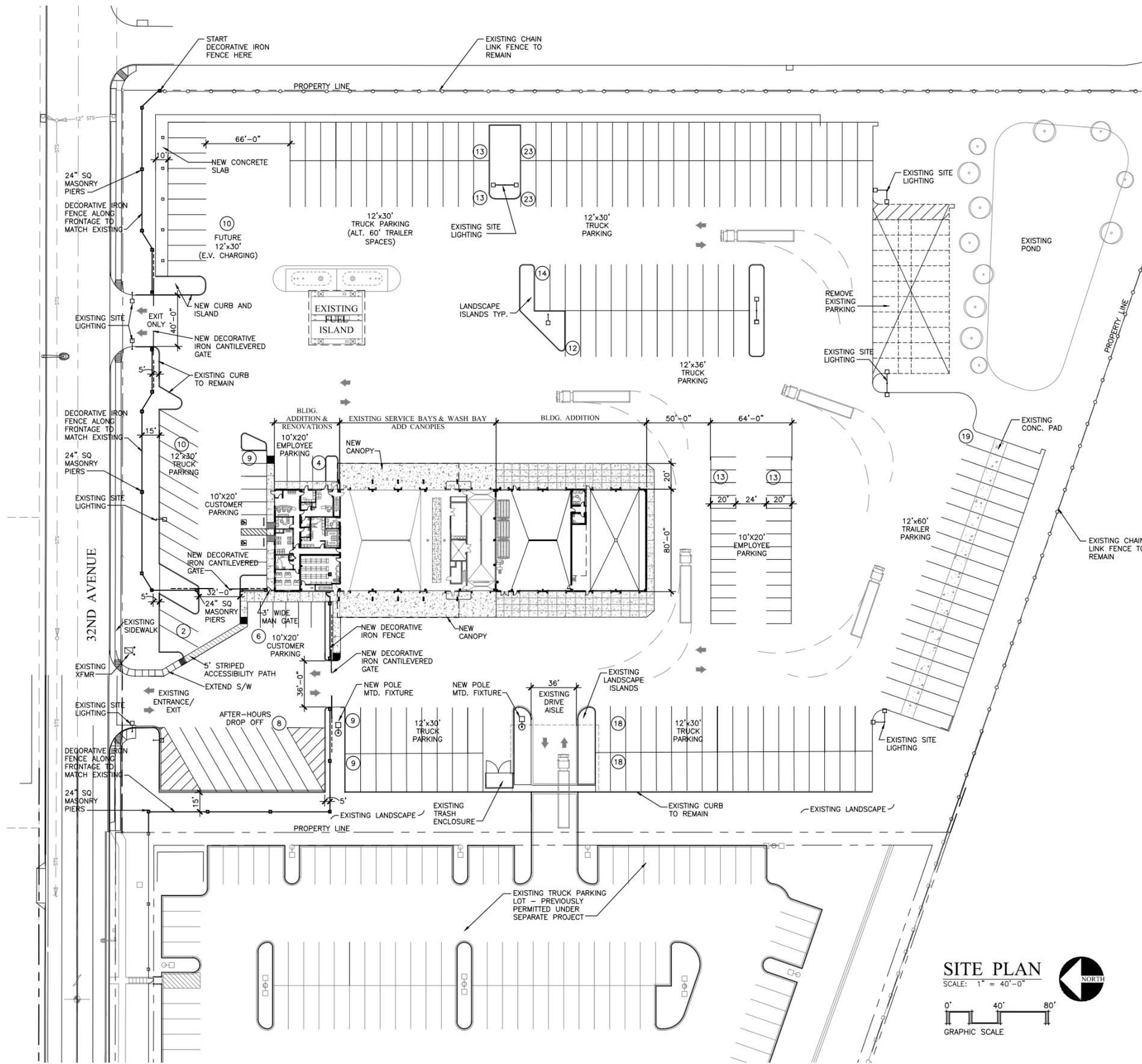
Intersection						
Int Delay, s/veh	1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Vol, veh/h	169	4	14	268	12	17
Future Vol, veh/h	169	4	14	268	12	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	26	26	13	13	50	50
Mvmt Flow	190	4	16	301	13	19

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	194	0	375
Stage 1	-	-	-	-	192
Stage 2	-	-	-	-	183
Critical Hdwy	-	-	4.36	-	7.8
Critical Hdwy Stg 1	-	-	-	-	6.8
Critical Hdwy Stg 2	-	-	-	-	6.8
Follow-up Hdwy	-	-	2.33	-	4
Pot Cap-1 Maneuver	-	-	1300	-	488
Stage 1	-	-	-	-	695
Stage 2	-	-	-	-	704
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1300	-	481
Mov Cap-2 Maneuver	-	-	-	-	481
Stage 1	-	-	-	-	695
Stage 2	-	-	-	-	693

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	11
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	630	-	-	1300	-
HCM Lane V/C Ratio	0.052	-	-	0.012	-
HCM Control Delay (s)	11	-	-	7.8	0.1
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

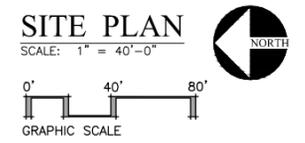
Conceptual Site Plan



BUILDING DATA		
EXISTING BUILDING AREA: OFFICE B-OCCUPANCY	FIRST FLOOR	2,560 SF
	SECOND FLOOR	2,560 SF
		5,120 SF
NEW ADDITON AREA B-OCCUPANCY		+1,600 SF
	TOTAL OFFICE	= 6,760 SF
EXISTING BUILDING AREA: SERVICE BAYS S-1 OCCUPANCY		9,816 SF
NEW SERVICE BAY ADDITION S-1 OCCUPANCY		+ 9,282 SF
	TOTAL SERVICE BAY	= 19,098 SF
TOTAL NEW AND EXISTING BUILDING AREA = 25,858 SF		

PARKING DATA		
TYPE		WITH ALTERNATE TRAILER PARKING
10' X 20' CARS	45	
12' X 30' TRUCKS	172	164
12 X 60' TRAILERS	19	27
12 X 30' E.V. CHARGING	10	

SITE AREA = 9.936 ACRES



BUILDING ADDITION & RENOVATIONS
 PENSKE TRUCK LEASING
 15600 E. 32ND AVENUE
 AURORA, CO.

K/G ARCHITECTS
 7585 E. REDFIELD ROAD
 SUITE 102
 SCOTTSDALE, AZ. 85260
 (480) 443-3705 - TEL.
 (480) 443-3805 - FAX

DRAWN BY: BIA
 CHECKED BY: LK / PG
 PROJECT NO: 21114

DATE	REVISIONS
04-28-22	PROGRESS

SHEET NO: **A1-0**

ISSUED FOR: PROGRESS